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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,684	03/19/2004	Michael J. Ziegler	1923A1	8171

7590 10/10/2006

PPG INDUSTRIES, INC.  
Intellectual Property Department  
One PPG Place  
Pittsburgh, PA 15272

EXAMINER
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SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/804,684

Applicant(s)

ZIEGLER ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. The 35 U.S.C. 103(a) rejection over Watanabe et al. Patent No. 4,522,984 and Nakamura et al. Patent No. 5,037,899 is withdrawn due to the revelation on page 8, paragraph 23, the last two lines of the specification that "the 'film-forming resin' as used herein does not refer to the comb polymer" which is the designation of claimed compound (a) according to page 2, paragraph 6, lines 5-7.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in the non-Final rejection mailed June 20, 2006.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. Patent No. 4,522,984 and Nakamura et al. Patent No. 5,037,899 in view of Japanese Patent No. 53-58536.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of the Japanese patent.

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of Great Britain Patent No. 1,523,903.

Claims 1-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent in view of Watanabe et al. and Nakamura et al..

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the British patent in view of Watanabe et al.

2. Claims 21, 23 and 24 requiring an epoxy equivalent weight of from 10,000 to 150,000 precludes the values of from about 600 to about 2500 espoused in column 5, lines 4-5 of Nakamura et al.

3. The British patent is applicable only to claims 23 and 24 which do not require the claimed melting temperature for the lactone/hydroxyl group-containing epoxy resin reaction product (a) of from about 40°C to about 65°C described on page 4, paragraph 12, pages 4-5. The British patent sets forth a melting point of the epoxy resin of not below 70°C, thereby exceeding the claimed maximum of 65°C.

4. The Japanese patent disclosing a reaction product of a bisphenol epoxy resin and a primary amine is not germane to claims 22 and 24 denoting the express lack of amine chain extension as described on page 4, paragraph 7, line paragraph 22, lines 16-18 of the instant specification.

Otherwise, the rejections are maintained for the reasons of record set forth in the non-Final rejection. The arguments filed September 22, 2006 have been considered but are unpersuasive.

5. The translation for the Japanese patent submitted September 22, 2006 has not been certified. However, even if its content is assumed to be accurate, Watanabe et al. acknowledges the reactivity of the terminal epoxy groups of the lactone-modified epoxy resin with a polyester polyol (col. 8, lines 20-22). It would have been obvious to employ the lactone-modified epoxy resin of Watanabe et al. and Nakamura et al. as the epoxy resin of the British and Japanese patent in order to enhance the flexibility, heat and water resistance, low temperature properties and miscibility (Watanabe et al., col. 4, lines 39-40 and Nakamura et al., col. 1, lines 51-55). The lactone-modified epoxy resins of Watanabe et al. and Nakamura et al. possess terminal epoxy groups available for reaction with the carboxyl groups of the polyester of the Japanese patent,

or the hydroxyl groups of the other polyester of the Japanese patent, or the polyester of the British patent.

6. The declaration merely establishes epoxy equivalent weight of 34,127 for the claimed lactone-modified epoxy resin of Example 1 on page 10, paragraph 32 and does not address the efficacy of those set forth in Watanabe et al. and Nakamura et al. as capable of reacting with the polyesters of the Japanese and British patents.

The amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL** (MPEP § 706.07(a)).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

rs  
10/2/2006



ROBERT E.L. SELLERS  
PRIMARY EXAMINER